AMENDMENT TO THE CLAIMS:

1. (currently amended) A method of screening for biologically active agents that modulate a cancer associated protein kinase function, the method comprising:

combining a candidate biologically active agent with any one of:

(a) a polypeptide encoded by ~~SEQ ID NOS:1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25 or 27~~ SEQ ID NO:3; or having the amino acid sequence set forth in ~~SEQ ID NOS:2, 4, 6, 8, 10, 12,14, 16, 18, 20, 22, 24, 26 or 28~~ SEQ ID NO:4;

(b) a cell comprising a nucleic acid encoding a polypeptide encoded by ~~SEQ ID NOS:1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25 or 27~~ SEQ ID NO:3; or

(c) a non-human transgenic animal model for cancer associated kinase gene function comprising one of: (i) a knockout of a gene corresponding to ~~SEQ ID NOS:1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25 or 27~~ SEQ ID NO:3; (ii) an exogenous and stably transmitted mammalian gene sequence comprising polypeptide encoded by ~~SEQ ID NOS:1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25 or 27~~ SEQ ID NO:3; and determining the effect of said agent on kinase function.

2. (currently amended) A method for the diagnosis of cancer, the method comprising:

determining the upregulation of expression in ~~SEQ ID NOS:1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25 or 27~~ SEQ ID NO:3 in ~~said cancer~~ in a patient sample.

3. (original) The method of Claim 2, wherein said cancer is a breast, liver, colon, muscle, prostate, kidney, lung, placental, or uterine cancer.

4-5. (canceled)

6. (original) A method for inhibiting the growth of a cancer cell, the method comprising:

downregulating activity of the polypeptide encoded by SEQ ID NOS:1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25 or 27; or having the amino acid sequence set forth in SEQ ID NOS:2, 4, 6, 8, 10, 12,14, 16, 18, 20, 22, 24, 26 or 28; in said cancer cell.

7-9. (canceled)

10. (currently amended) A method of screening for targets of a cancer associated

protein kinase, wherein said targets are associated with signal transduction in cancer cells, the method comprising:

comparing the pattern of gene expression or protein phosphorylation in a normal cell, and in a tumor cell characterized by up-regulation of ~~SEQ ID NOS:1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25 or 27~~ SEQ ID NO:3.

11-12. (canceled)

13. (currently amended) The method according to claim 10, wherein said signal transduction involves activation ~~HSM801163,~~ PCTK3~~, PFTK1, CRK7, PRKCN, CIT, STK6, PDK1, PAK4, ITK, BMX, PRKCM, NEK6 or PDPK1~~.

14. (original) An isolated nucleic acid comprising the sequence set forth in SEQ ID NOS:1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25 or 27.

15. (previously presented) A method to treat a tumor comprising administering a therapeutic amount of a composition comprising:

a compound of the general formula general formula $\alpha(P_z)$, wherein $\alpha(P_z)$ is one or more moieties which specifically binds to a human protein HSM801163, PCTK3, PFTK1, CRK7, PRKCN, CIT, STK6, PDK1, PAK4, ITK, BMX, PRKCM, NEK6 or PDPK1, wherein the binding of $\alpha(P_z)$ alters the function of the human protein $\alpha(P_z)$ or wherein $\alpha(P_z)$ comprises one or more cytotoxic moieties;

and a pharmaceutically acceptable carrier.

16-25. (canceled)

26. (previously presented) A compound for the treatment of a tumor of the general formula $\alpha(P_z)$, wherein $\alpha(P_z)$ is one or more moieties which specifically binds to human HSM801163, PCTK3, PFTK1, CRK7, PRKCN, CIT, STK6, PDK1, PAK4, ITK, BMX, PRKCM, NEK6 or PDPK1 protein, and alters the function of the protein or comprises one or more cytotoxic moieties.

27-40. (canceled)

41. (original) A method for visualizing a tumor in a patient, the method comprising:

(a) administering to a patient an effective amount of a composition comprising:

a compound of the general formula $\alpha(P_z)I$, wherein $\alpha(P_z)$ is one or more moieties which specifically binds to a human HSM801163, PCTK3, PFTK1, CRK7, PRKCN, CIT, STK6, PDK1, PAK4, ITK, BMX, PRKCM, NEK6 or PDPK1 protein, and I is one or more imaging moieties; and a pharmaceutically acceptable carrier; and (b) visualizing the imaging moieties of the compound.

42-57. (canceled)